

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A radiation image information recording/reading apparatus comprising:

an image recording unit for recording radiation image information in a stimuable phosphor sheet by irradiating radiation representing the radiation image information on the sheet;

stimulating-ray main scan means for carrying out main scan of the sheet having the radiation image information therein with excitation light irradiated from a side opposite a side of irradiation of the radiation;

vertical scan means for relatively moving either the stimuable phosphor sheet or the stimulating-ray main scan means to the other in a direction crossing a direction of the main scan;

photoelectric detection means for detecting phosphorescent light emitted from an area in the sheet on which the excitation light have has been irradiated, from a side of irradiation of the excitation light and from a side opposite of the radiation irradiation;

~~a line sensor disposed on only one side of the stimuable phosphor sheet;~~

~~a linear light source disposed on only one side of the stimuable phosphor sheet;~~

erasing means for releasing residual radiation energy from the sheet after reading the light, prior to recording of another image in the sheet by the image recording unit;

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a radiation absorption plate placed close to a surface of the sheet on the side opposite of the side of the radiation irradiation at the time of the radiation irradiation on the sheet and moved away from the sheet after the radiation irradiation; and

a moving device for moving the radiation absorption plate;

wherein the ~~excitation light~~ main scan means comprises a linear light source disposed on only one side of the stimuable phosphor sheet for emitting the excitation light in the form of fan beams, and the photoelectric detection means comprises a line sensor disposed on only one side of the stimuable phosphor sheet; and

wherein the line sensor and the linear light source are disposed on the same side of the stimuable phosphor sheet.

2. (currently amended): A radiation image information recording/reading apparatus as ~~defined in Claim 1,~~ comprising:

an image recording unit for recording radiation image information in a stimuable phosphor sheet by irradiating radiation representing the radiation image information on the sheet;

stimulating-ray main scan means for carrying out main scan of the sheet having the radiation image information therein with excitation light irradiated from a side opposite a side of irradiation of the radiation;

vertical scan means for relatively moving either the stimuable phosphor sheet or the stimulating-ray main scan means to the other in a direction crossing a direction of the main scan;

photoelectric detection means for detecting phosphorescent light emitted from an area in the sheet on which the excitation light has been irradiated, from a side of irradiation of the excitation light and from a side opposite of the radiation irradiation;

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erasing means for releasing residual radiation energy from the sheet after reading the light, prior to recording of another image in the sheet by the image recording unit;

a radiation absorption plate placed close to a surface of the sheet on the side opposite of the side of the radiation irradiation at the time of the radiation irradiation on the sheet and moved away from the sheet after the radiation irradiation; and

a moving device for moving the radiation absorption plate;

wherein the main scan means comprises a linear light source disposed on only one side of the stimuable phosphor sheet for emitting the excitation light in the form of fan beams, and the photoelectric detection means comprises a line sensor disposed on only one side of the stimuable phosphor sheet;

wherein the line sensor and the linear light source are disposed on the same side of the stimuable phosphor sheet;

wherein the stimuable phosphor sheet is a stimuable phosphor sheet having a stimuable phosphor layer and a reflection layer for reflecting the phosphorescent light and

the stimuable phosphor sheet is scanned with the excitation light in a state where the stimuable phosphor layer is located closer to the excitation light main scan means and the reflection layer is located farther from the excitation light main scan means.

3. (previously presented): A radiation image information recording/reading apparatus ~~as defined in Claim 1,~~ comprising:

an image recording unit for recording radiation image information in a stimuable phosphor sheet by irradiating radiation representing the radiation image information on the sheet;

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stimulating-ray main scan means for carrying out main scan of the sheet having the radiation image information therein with excitation light irradiated from a side opposite a side of irradiation of the radiation;

vertical scan means for relatively moving either the stimuable phosphor sheet or the stimulating-ray main scan means to the other in a direction crossing a direction of the main scan;

photoelectric detection means for detecting phosphorescent light emitted from an area in the sheet on which the excitation light has been irradiated, from a side of irradiation of the excitation light and from a side opposite of the radiation irradiation;

erasing means for releasing residual radiation energy from the sheet after reading the light, prior to recording of another image in the sheet by the image recording unit;

a radiation absorption plate placed close to a surface of the sheet on the side opposite of the side of the radiation irradiation at the time of the radiation irradiation on the sheet and moved away from the sheet after the radiation irradiation; and

a moving device for moving the radiation absorption plate;

wherein the main scan means comprises a linear light source disposed on only one side of the stimuable phosphor sheet for emitting the excitation light in the form of fan beams, and the photoelectric detection means comprises a line sensor disposed on only one side of the stimuable phosphor sheet;

wherein the line sensor and the linear light source are disposed on the same side of the stimuable phosphor sheet; and

wherein the stimuable phosphor sheet is an anisotropic stimuable phosphor sheet for restricting spread of the excitation light and/or the phosphorescent light within the sheet.

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4. (original): A radiation image information recording/reading apparatus as defined in Claim 2, wherein

the stimuable phosphor sheet is an anisotropic stimuable phosphor sheet for restricting spread of the excitation light and/or the phosphorescent light within the sheet.

5. (canceled).

6. (original): A radiation image information recording/reading apparatus as defined in claim 1, wherein the linear light source comprises:

a laser diode array; and

a cylindrical lens.

Claims 7-14. (canceled).

15. (previously presented): A radiation image information recording/reading apparatus as defined in claim 1, wherein a table for supporting an object, said stimuable phosphor sheet and a scan means comprising said linear light source and said line sensor are provided in this order, and the stimuable phosphor sheet is fixed at a predetermined position and the scan means moves along the table.

16. (previously presented): A radiation image information recording/reading apparatus as defined in claim 1, wherein the vertical scan means is located at a position where the vertical scan means does not overlap with the stimuable phosphor sheet at the time of recording the radiation image information.